



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,574	02/28/2002	Edward Harrison Teague	020111	9018
23696	7590	11/01/2005	EXAMINER	
QUALCOMM, INC 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			KIM, KEVIN	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,574

Applicant(s)

TEAGUE ET AL.

Examiner

Kevin Y. Kim

Art Unit

2638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-26, 28, 29, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-26, 29 and 32 is/are allowed.
- 6) ☐ Claim(s) 19-21, 28 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. An update search has been conducted and a new prior art against the subject matter of 19,20,21,28 and 31 claims has been discovered. The indicated allowability of claims 19,20,21,28 and 31 is withdrawn in view of the newly discovered reference(s) which also teaches controlling advance and retard limit of a finger as claimed. Rejections based on the newly cited reference(s) follow. It is regrettable that a premature indication of allowability might have caused inconveniences to applicant.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 19, 20, 28 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Smolyar et al (US 6,314,130).

Claims 19.

Smolyar et al discloses a method of timing tracking a plurality of fingers in a Rake receiver, comprising

restricting each finger from tracking outside motion limits, see col. 8, lines 36-40, describing “1.5 Tc” as a minimum separation between two fingers,

regenerating the motion limits for a first finger adjacent to a second finger when a timing tracking command is issued to the second finger. See col. 9, lines 28-30. See Fig.1 showing direction metrics 1,2 where each finger movement causes the regeneration of the motion limits for its adjacent finger.

Claims 20, 28 and 31.

Smolyar et al discloses a method and apparatus of timing tracking a plurality of fingers, each finger having an advance limit and a retard limit (see col. 8, lines 36-40, describing "1.5 Tc" as a minimum separation between two fingers), comprising;

advancing the retard limit of a first finger adjacent to and ahead of a second finger and the advance limit of a third finger adjacent to and behind the second finger when an advance command is delivered to the second finger, and

retarding the retard limit of the first finger and the advance limit of the third finger when a retard command is delivered to the second finger.

In other words, when the second finger is moved, the fingers on either side of the fingers moves in the same direction. See Fig. 2B, direction metric 10 and Fig.2C, direction metric 27 where all the fingers move in a same direction when a finger, i.e., a middle finger moves.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2638

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smolyar et al (US 6,314,130), as applied to claim 20 above, in view of La Rosa et al (US 6,078,611, previously cited).

Smolyar et al disclose all the subject matter claimed except for suppressing the advance and retard commands for the second finger when the commands would move the offset of the second finger outside its motion limits. La Rosa teaches that when the finger movement correction violates the time separation threshold, the proposed correction is disallowed since otherwise the benefit of path diversity would be lost. See col. 8, lines 13-24. Thus, it would have been obvious to one skilled in the art at the time the invention was made to suppressing the advance and retard commands for the second finger when the commands would move the offset of the second finger outside its motion limits, as taught by La Rosa, for the purpose of not losing the benefit of path diversity reception.

Allowable Subject Matter

7. Claims 22-26,29 and 32 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: No prior art has been found to teach or suggest a method of timing tracking a plurality fingers (in a

Art Unit: 2638

Rake receiver), where 1) the advance and retard limits of a first finger is advanced when two conditions are met, one condition being when the first finger is advanced past the center position and the other condition being when the advance limit of the first finger **plus** a predetermined guard band is less than the retard limit of an adjacent second finger which tracks ahead of the first finger and 2) the advance and retard limits of the first finger is retarded when two conditions are met, one condition being when the first finger is retarded past the center position and the other condition being when the retard limit of the first finger **minus** a predetermined guard band is greater than the advance limit of an adjacent third finger which tracks behind the first finger.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KVK
1/28/05


KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER